# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

**NABL** - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED


Job No.: CTCE/BBMP/W.No.08/NC/CEMENT/2014-15

Date: 29.04.2014

## TEST REPORT

| | | |
|---|---|---|
| CLIENT | : | **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore. |
| AGENCY | : | **Mr. C. Narasaraju,** Contractor, Bangalore. |
| NAME OF THE WORK | : | Construction of CC Drain in Balaji Layout in Ward No.08, Kodigehalli, BBMP, Bangalore. |
| REFERENCE | : | AEE/KG/(WO)/655/2014-15 Dated: 28.04.2014 |
| SAMPLE ID | : | Cement |
| SAMPLES SUPPLIED BY | : | AGENCY |

The results of the tests conducted on the cement sample are as follows:

| Sl.No | Descriptions | Test Method as per IS | Test Result | Requirements as per IS: 8112-1989 |
|---|---|---|---|---|
| 1 | a) Initial Setting Time | IS-4031 (Part -5) | 150 Minutes | Not Less than 30 Minutes |
| | b) Final Setting Time | IS-4031 (Part -5) | 485 Minutes | Not More than 600 Minutes |
| 2 | Soundness | IS-4031 (Part 3) by the Le-Chatelier method | 1 mm | Not more than 10 mm |
| 3 | Standard Consistency | IS-4031 (Part -4) | 26.50 % | |

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Note:

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Assistant Executive Engineer,
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Job No.: CTCE/BBMP/W.No.08/NC/SAND/2014-15 : 29.04.2014

## TEST REPORT ON FINE AGGREGATES (SAND)
## IS 383-1970 (RA- 2002)

**Client** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

**Agency** : **Mr. C. Narasaraju,** Contractor, Bangalore.

**Name of Work** : Construction of CC Drain in Balaji Layout in Ward No.08, Kodigehalli, BBMP, Bangalore.

**Reference** : AEE/KG/(WO)/655/2014-15 Dated: 28.04.2014

Date of Testing : 29.04.2014

Material : Sand

Total Wt. of Aggregates in gms **2000**

| Is Sieve Size in mm | Weight Retained (gm) | Retained Weight in % | Cumulative Retained Weight in % | Cumulative Weight Passing in % | Spec.Limits For Zone-II |
|---|---|---|---|---|---|
| 10 | 0 | 0 | 0 | 100 | 100 |
| 4.75 | 102 | 5.10 | 5.10 | 94.9 | 90-100 |
| 2.36 | 232 | 11.60 | 16.70 | 83.3 | 75-100 |
| 1.18 | 507 | 25.35 | 42.05 | 58.0 | 55-90 |
| 600 Micron | 428 | 21.40 | 63.45 | 36.6 | 35-59 |
| 300 Micron | 483 | 24.15 | 87.60 | 12.4 | 8-30 |
| 150 Micron | 204 | 10.20 | 97.80 | 2.2 | 0-10 |

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Job No.: CTCE/BBMP/W.No.08/NC/AGG/2014-15 : 29.04.2014

## TEST REPORT ON COARSE AGGREGATES
### IS 383-1970 (RA- 2002)

**Client** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

**Agency** : **Mr. C. Narasaraju,** Contractor, Bangalore.

**Name of Work** : Construction of CC Drain in Balaji Layout in Ward No.08, Kodigehalli, BBMP, Bangalore.

**Reference** : AEE/KG/(WO)/655/2014-15 Dated: 28.04.2014

Date of Testing : 29.04.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **26000**

| Is Sieve Size in mm | Weight Retained (gm) | Retained Weight in % | Cumulative Retained Weight in % | Cumulative Weight Passing in % | Spec.Limits |
|---|---|---|---|---|---|
| 80 | 0 | 0 | 0 | 100 | 100 |
| 40 | 1010 | 3.88 | 3.88 | 96.12 | 95-100 |
| 20 | 15845 | 60.94 | 64.83 | 35.17 | 30-70 |
| 10 | 6255 | 24.06 | 88.88 | 11.12 | 10-35 |
| 4.75 | 2570 | 9.88 | 98.77 | 1.23 | 0-5 |

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Job No.: CTCE/BBMP/W.No.08/NC/STEEL/2014-15 29.04.2014

## TEST REPORT ON REINFORCEMENT STEEL

| | | |
|---|---|---|
| Client | : | **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore. |
| Agency | : | **Mr. C. Narasaraju,** Contractor, Bangalore. |
| Name of the work | : | Construction of CC Drain in Balaji Layout in Ward No.08, Kodigehalli, BBMP, Bangalore. |
| Reference | : | AEE/KG/(WO)/655/2014-15 Dated: 28.04.2014 |
| Date of Test | : | 29.04.2014 |
| Technical Reference | : | IS: 1786-2008 |

| Sl. No | Nominal size (dia) (mm) | Mass per metre (Kg/mtr) | TENSILE STRENGTH | | | Bend Test | Rebend Test |
|---|---|---|---|---|---|---|---|
| | | | 0.20% proof stress/Yield stress N/mm² | Tensile strength (Ultimate stress) N/mm² | Elongation percent gauge length | | |
| 1 | 8 | 0.40 | 510 | 548 | 12.80 | O.K | O.K |

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Job No.: CTCE/BBMP/W.No.08/NC/CUBE/2014-15

30.05.2014

## TEST REPORT ON CONCRETE CUBES

| | |
|---|---|
| Client | : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore. |
| Agency | : **Mr. C. Narasaraju,** Contractor, Bangalore. |
| Name of the work | : Construction of CC Drain in Balaji Layout in Ward No.08, Kodigehalli, BBMP, Bangalore. |
| Reference | : AEE/KG/(WO)/655/2014-15 Dated: 28.04.2014 |
| Sample ID | : Drain Concrete |
| Size of cubes | : 150mmx150mmx150mm |
| Cross Sectional Area | : 22500 $mm^2$ |
| Technical Reference | : IS: 516-1959 (Reaffirmed 2008) |
| Grade of Concrete | : $M_{20}$ |
| Compressive Strength as on | : $28^{th}$ day |

| Sl.No. | Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 02.05.2014 | 30.05.2014 | 8.295 | 508.4 | 22.60 |
| 2 | 02.05.2014 | 30.05.2014 | 8.378 | 515.6 | 22.92 |
| 3 | 02.05.2014 | 30.05.2014 | 8.492 | 526.3 | 23.39 |

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AG 08

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Job No.: CTCE/BBMP/W.No.08/NC/CUBE/2014-15 30.05.2014

## TEST REPORT ON CONCRETE CUBES

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Mr. C. Narasaraju,** Contractor, Bangalore.

Name of the work : Construction of CC Drain in Balaji Layout in Ward No.08, Kodigehalli, BBMP, Bangalore.

Reference : AEE/KG/(WO)/655/2014-15 Dated: 28.04.2014

Sample ID : Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 $mm^2$

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : $M_{20}$

Compressive Strength as on : $28^{th}$ day

| Sl.No. | Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 02.05.2014 | 30.05.2014 | 8.147 | 487.2 | 21.65 |
| 2 | 02.05.2014 | 30.05.2014 | 8.263 | 498.7 | 22.16 |
| 3 | 02.05.2014 | 30.05.2014 | 8.358 | 512.6 | 22.78 |

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Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Mr. C. Narasaraju,** Contractor, Bangalore.

Name of the work : Construction of CC Drain in Balaji Layout in Ward No.08, Kodigehalli, BBMP, Bangalore.

Reference : AEE/KG/(WO)/655/2014-15 Dated: 28.04.2014

Sample ID : Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 $mm^2$

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : $M_{20}$

Compressive Strength as on : $28^{th}$ day

| Sl.No. | Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 02.05.2014 | 30.05.2014 | 8.258 | 503.6 | 22.38 |
| 2 | 02.05.2014 | 30.05.2014 | 8.475 | 528.3 | 23.48 |
| 3 | 02.05.2014 | 30.05.2014 | 8.362 | 514.9 | 22.88 |

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